

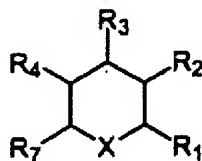
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

The list of currently pending claims is presented below.

1 1. (Currently amended) A method of modulating an Edg-7 receptor
2 mediated biological activity comprising contacting a cell expressing the Edg-7 receptor with an
3 amount of ~~an~~ a modulator of the Edg-7 receptor sufficient to modulate the Edg-7 receptor
4 mediated biological activity wherein the modulator is a compound of the structural formula
5 Formula (I):



(I)

6
7 or a pharmaceutically ~~available~~ acceptable solvate or hydrate thereof, wherein;

8 each of R₁, R₂, R₃, R₄ and R₇ is a member independently selected from the group

9 consisting of -H, -halo, -NO₂, -CN, -C(R₅)₃, -(CH₂)_mOH, -N(R₅)(R₅), -

10 O(CH₂)_mR₅, -C(O)R₅, -C(O)NR₅R₅, -C(O)NH(CH₂)_m(R₅), -OCF₃, -benzyl,

11 -CO₂CH(R₅)(R₅), -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl,

12 -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₅-C₁₀)cycloalkenyl,

13 -(C₅)heteroaryl, -(C₆)heteroaryl, -(C₅-C₁₀)heteroaryl, -naphthyl,

14 -(C₃-C₁₀)heterocycle, -CO₂(CH₂)_mR₅, -N(OH)aryl, -NHC(O)R₅, -NHC(O)OR₅,

15 -NHC(O)NHR₅, ~~heterocyclealkyl~~ heterocycloalkyl, -C(S)N(R₅)(R₅),

16 -(C₁-C₁₀)alkylNHC(O)(CH₂)_mR₅, -(C₁-C₁₀)alkylNR₅R₅,

17 -S(O)₂N(R₅)C(O)NH(heteroaryl), -OC(O)(CH₂)_mCHR₅R₅, -CO₂(CH₂)_mCHR₅R₅,

18 -OC(O)OR₅, -SR₅, -S(O)R₅, -S(O)₂R₅, -S(O)₂NHR₅, ~~or~~ and



wherein

each R_5 and R_6 is a member independently selected from the group consisting of –

H, -halo, -NO₂, -CN, -OH, -CO₂H, -N(C₁-C₁₀)alkyl(C₁-C₁₀)alkyl,
-O(C₁-C₁₀)alkyl, -C(O)(C₁-C₁₀)alkyl, -C(O)NH(CH₂)_m(C₁-C₁₀)alkyl,
-OCF₃, -benzyl, -CO₂(CH₂)_mCH((C₁-C₁₀)alkyl(C₁-C₁₀)alkyl),
-CO₂(C₁-C₁₀)alkyl, -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl,
-(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₅-C₁₀)cycloalkenyl,
-(C₅)heteroaryl, -(C₆)heteroaryl, -phenyl, naphthyl, -(C₃-C₁₀)heterocycle,
-CO₂(CH₂)_m(C₁-C₁₀)alkyl, -CO₂(CH₂)_mH, -NHC(O)(C₁-C₁₀)alkyl,
-NHC(O)NH(C₁-C₁₀)alkyl, -NH(aryl), -N=C(aryl),
-OC(O)O(C₁-C₁₀)alkyl, or and -SO₂NH₂;

X is selected from CH₂, C=O, O, S, SO₂, C, or and NR₅;

R_1 , R_2 , R_3 , R_4 and R_7 taken in any combination can form one or more substituted or unsubstituted 5 or 6 membered cyclic or heterocyclic rings or a 6-membered aromatic ring;

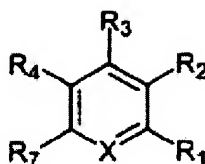
R_1 , R_2 , R_3 , R_4 and R_7 can also be an electron such that when two groups are on adjacent carbon atoms they form a double bond;

two R_6 groups on adjacent carbon atoms can together form a 5 or 6 membered cyclic or heterocyclic ring or a 6-membered aromatic ring;

each m is independently an integer ranging from 0 to 8; and

each p is independently an integer ranging from 0 to 5.

2. (Currently amended) A method of modulating an Edg-7 receptor mediated biological activity in a subject comprising administering to the subject a therapeutically effective amount of a modulator of the Edg-7 receptor wherein the modulator is a compound of ~~the structural formula~~ Formula (II): structural formula (II):



(II)

or a pharmaceutically available acceptable solvate or hydrate thereof, wherein;

each of R₁, R₂, R₃, R₄ and R₇ is a member independently selected from the group

consisting of -H, -halo, -NO₂, -CN, -C(R₅)₃, -(CH₂)_mOH, -N(R₅)(R₅), -
O(CH₂)_mR₅, -C(O)R₅, -C(O)NR₅R₅, -C(O)NH(CH₂)_m(R₅), -OCF₃, -benzyl,
-CO₂CH(R₅)(R₅), -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl,
-(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₅-C₁₀)cycloalkenyl,
-(C₅)heteroaryl, -(C₆)heteroaryl, -(C₅-C₁₀)heteroaryl, -naphthyl,
-(C₃-C₁₀)heterocycle, -CO₂(CH₂)_mR₅, -N(OH)aryl, -NHC(O)R₅, -NHC(O)OR₅,
-NHC(O)NHR₅, ~~heterocyclealkyl~~ heterocycloalkyl, -C(S)N(R₅)(R₅),
-(C₁-C₁₀)alkylNHC(O)(CH₂)_mR₅, -(C₁-C₁₀)alkylNR₅R₅,
-S(O)₂N(R₅)C(O)NH(heteroaryl), -OC(O)(CH₂)_mCHR₅R₅, -CO₂(CH₂)_mCHR₅R₅,
-OC(O)OR₅, -SR₅, -S(O)R₅, -S(O)₂R₅, -S(O)₂NHR₅, or and



wherein

each R₅ and R₆ is a member independently selected from the group consisting of -

H, -halo, -NO₂, -CN, -OH, -CO₂H, -N(C₁-C₁₀)alkyl(C₁-C₁₀)alkyl,
-O(C₁-C₁₀)alkyl, -C(O)(C₁-C₁₀)alkyl, -C(O)NH(CH₂)_m(C₁-C₁₀)alkyl,
-OCF₃, -benzyl, -CO₂(CH₂)_mCH((C₁-C₁₀)alkyl(C₁-C₁₀)alkyl),
-CO₂(C₁-C₁₀)alkyl, -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, C₁-
C₁₀-(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl,
-(C₅-C₁₀)cycloalkenyl, -(C₅)heteroaryl, -(C₆)heteroaryl, -phenyl, naphthyl,
-(C₃-C₁₀)heterocycle, -CO₂(CH₂)_m(C₁-C₁₀)alkyl, -CO₂(CH₂)_mH,

28 -NHC(O)(C₁-C₁₀)alkyl, -NHC(O)NH(C₁-C₁₀)alkyl, -NH(aryl),
29 -N=C(aryl), -OC(O)O(C₁-C₁₀)alkyl, ~~or~~ and -SO₂NH₂;
30 X is selected from C, ~~or~~ and N;
31 R₁, R₂, R₃, R₄ and R₇ taken in any combination can form one or more substituted or
32 unsubstituted 5 or 6 membered cyclic or heterocyclic rings or a 6-membered
33 aromatic ring;
34 R₁, R₂, R₃, R₄ and R₇ can also be an electron such that when two groups are on adjacent
35 carbon atoms they form a double bond;
36 two R₆ groups on adjacent carbon atoms can together form a 5 or 6 membered cyclic or
37 heterocyclic ring or a 6-membered aromatic ring;
38 each m is independently an integer ranging from 0 to 8; and
39 each p is independently an integer ranging from 0 to 5.

1 3. (Original) The method of Claim 1 or 2, wherein the modulator is an
2 agonist.

1 4. (Original) The method of Claim 1 or 2, wherein the modulator is an
2 antagonist.

1 5. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 200 fold inhibitory selectivity for Edg-7 relative to other Edg receptors.

1 6. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 40 fold inhibitory selectivity for Edg-7 relative to other Edg receptors.

1 7. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 12 fold inhibitory selectivity for Edg-7 relative to other Edg receptors.

1 8. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 5 fold inhibitory selectivity for Edg-7 relative to other Edg receptors.

1 9. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 20 fold inhibitory selectivity for Edg-7 relative to other Edg receptors.

1 10. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 200 fold inhibitory selectivity for Edg-7 relative to Edg-4 and Edg-2 receptors.

1 11. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 40 fold inhibitory selectivity for Edg-7 relative to Edg-4 and Edg-2 receptors.

1 12. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 12 fold inhibitory selectivity for Edg-7 relative to Edg-4 and Edg-2 receptors.

1 13. (Original) The method of Claim 1 or 2, wherein the modulator exhibits at
2 least about 5 fold inhibitory selectivity for Edg-7 relative to Edg-4 and Edg-2 receptors.

1 14. (Original) The method of Claim 1 or 2, wherein the biological activity is
2 cell proliferation.

1 15. (Original) The method of Claim 14, wherein the modulator exhibits at
2 least about 200 fold inhibitory selectivity for Edg-7 relative to other Edg receptors.

1 16. (Original) The method of Claim 14, wherein the modulator exhibits at
2 least about 5 fold inhibitory selectivity for Edg-7 relative to other Edg receptors.

1 17. (Original) The method of Claim 14, wherein the modulator exhibits at
2 least about 200 fold inhibitory selectivity for Edg-7 relative to Edg-4 and Edg-2 receptors.

1 18. (Original) The method of Claim 14, wherein the modulator exhibits at
2 least about 5 fold inhibitory selectivity for Edg-7 relative to Edg-4 and Edg-2 receptors.

1 19. (Currently amended) The method of Claim 14, wherein cell proliferation
2 leads to cancer selected from the group consisting of ovarian cancer, peritoneal cancer,

3 endometrial cancer, cervical cancer, breast cancer, colon cancer ~~or~~ and prostate prostate
4 cancer.

1 20. (Original) The method of Claim 14, wherein cell proliferation is
2 stimulated by LPA.

1 21. (Currently amended) The method of Claim 1 or 2, wherein the biological
2 activity is selected from the group consisting of calcium mobilization, VEGF synthesis, IL-8
3 synthesis, platelet activation, cell migration, phosphoinositide hydrolysis, inhibition of cAMP
4 formation, actin polymerization, apoptosis, angiogenesis, inhibition of wound healing,
5 inflammation, cancer invasiveness, suppressing autoimmune responses, ~~or~~ and atherogenesis.

1 22. (Currently amended) The method of Claim 1 or 2 wherein the modulator
2 binds to the Edg-7 receptor with a binding constant of at least about 10 ~~nM~~ nM.

1 23. (Currently amended) The method of Claim 1 or 2 wherein the modulator
2 binds to the Edg-7 receptor with a binding constant between about 100 fM and 1 μ M, ~~and 100~~
3 ~~fM~~.

1 24. (Original) The method of Claim 1 or 2, wherein the modulator is a
2 nucleic acid, protein or carbohydrate.

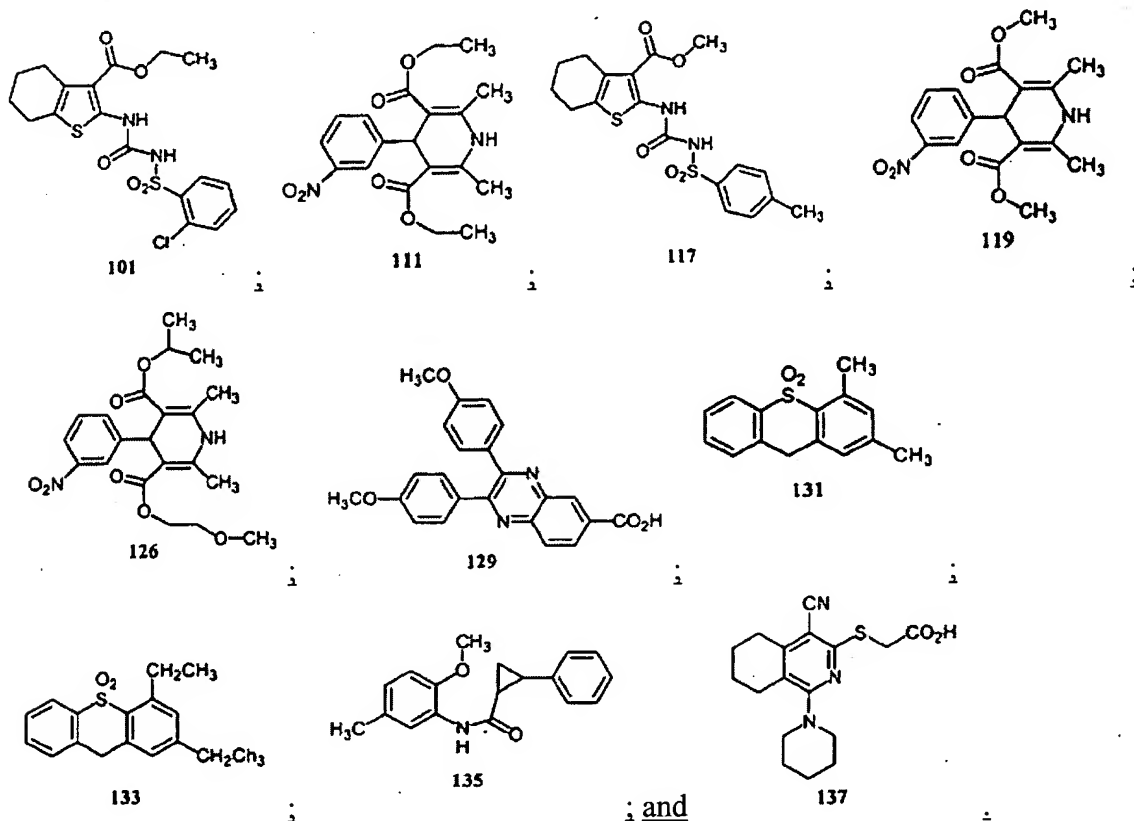
1 25. (Original) The method of Claim 1 or 2, wherein the modulator is an
2 organic molecule of molecular weight of less than 750 daltons.

1 26. (Currently amended) The method of Claim 1, wherein the cell is selected
2 from the group consisting of a hepatoma cell, an ovarian cell, an epithelial cell, a fibroblast cell,
3 a neuronal cell, a carcinoma cell, a pheochromocytoma cell, a myoblast cell, a platelet cell ~~or~~
4 and a fibrosarcoma cell.

1 27. (Currently amended) The method of Claim ~~24~~ 26, wherein the cell is
2 selected from the group consisting of OV202 human ovarian cell, a HTC rat hepatoma cell, a
3 CAOV-3 human ovarian cancer cell, MDA-MB-453 breast cancer cell, MDA-MB-231 breast

cancer cell, HUVEC cells A431 human epitheloid carcinoma cell ~~or~~ and a HT-1080 human fibrosarcoma cell.

28. (Currently amended) The method of Claim 1 or 2 wherein the modulator has ~~a the following structural~~ formula selected from:



29. (Currently amended) A method for treating or preventing a disease or condition selected from the group consisting of cancers, acute lung diseases, acute inflammatory exacerbation of chronic lung diseases, surface epithelial cell injury, ~~or~~ and cardiovascular diseases in a patient in need of said treatment or said prevention, said method comprising administering to a said patient in need of such treatment or prevention a therapeutically effective amount of a compound of ~~structural formula~~ Formulae (I) or (II).

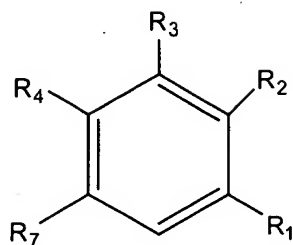
30. (Currently amended) A method for treating or preventing a disease or condition selected from the group consisting of ovarian cancer, peritoneal cancer, endometrial

3 cancer, cervical cancer, breast cancer, colorectal cancer, uterine cancer, stomach cancer, small
4 intestine cancer, thyroid cancer, lung cancer, kidney cancer, pancreas cancer, ~~prostrate~~ prostate
5 cancer, adult respiratory distress syndrome (ARDS), asthma, transcorneal freezing, cutaneous
6 burns, ischemia ~~or and arthesclerosis~~ atherosclerosis in a patient in need of said treatment or
7 said prevention, said method comprising administering to a said patient in need of such
8 ~~treatment or prevention~~ a therapeutically effective amount of a compound of ~~structural formula~~
9 Formulae (I) or (II).

1 31. (Currently amended) A method for treating or preventing a disease or
2 condition selected from the group consisting of cancers, acute lung diseases, acute
3 inflammatory exacerbation of chronic lung diseases, surface epithelial cell injury, ~~or and~~
4 cardiovascular diseases in a patient in need of said treatment or said prevention, said method
5 comprising administering to a said patient in need of such treatment or prevention a
6 therapeutically effective amount of a compound of ~~structural formula~~ Formulae (I) or (II) and
7 one or more agonists or antagonists of an Edg-7 receptor.

1 32. (Currently amended) A method for treating or preventing a disease or
2 condition selected from the group consisting of cancers, acute lung diseases, acute
3 inflammatory exacerbation of chronic lung diseases, surface epithelial cell injury, ~~or and~~
4 cardiovascular diseases in a patient in need of said treatment or said prevention, said method
5 comprising administering to a said patient in need of such treatment or prevention a
6 therapeutically effective amount of a compound of ~~structural formula~~ Formulae (I) or (II) and
7 one or more drugs useful in treating or preventing cancers, acute lung diseases, acute
8 inflammatory exacerbation of chronic lung diseases, surface epithelial cell injury, or
9 cardiovascular diseases.

1 33. (New) A method of treating cancer in a patient comprising:
2 administering to the patient a therapeutically effective amount of a modulator of an Edg-7
3 receptor wherein the modulator is a compound of Formula (III):



(III)

or a pharmaceutically acceptable solvate or hydrate thereof, wherein

R₂, R₃ and R₇ are H;

R₄ is an alkoxy group;

R₁ is a member selected from the group consisting of -H, -halo, -NO₂, -CN, -C(R₅)₃,
-(CH₂)_mOH, -N(R₅)(R₅), -O(CH₂)_mR₅, -C(O)R₅, -C(O)NR₅R₅, -
C(O)NH(CH₂)_m(R₅), -OCF₃, -benzyl, -CO₂CH(R₅)(R₅), -(C₁-C₁₀)alkyl,
-(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈C₁₄)bicycloalkyl,
-(C₅-C₁₀)cycloalkenyl, -(C₅)heteroaryl, -(C₆)heteroaryl, -(C₅-C₁₀)heteroaryl,
-naphthyl, -(C₃-C₁₀)heterocycle, -CO₂(CH₂)_mR₅, -N(OH)aryl, -NHC(O)R₅,
-NHC(O)OR₅, -NHC(O)NHR₅, -heterocycloalkyl, -C(S)N(R₅)(R₅),
-(C₁-C₁₀)alkylNHC(O)(CH₂)_mR₅, -(C₁-C₁₀)alkylNR₅R₅,
-S(O)₂N(R₅)C(O)NH(heteroaryl), -OC(O)(CH₂)_mCHR₅R₅, -CO₂(CH₂)_mCHR₅R₅,
-OC(O)OR₅, -SR₅, -S(O)R₅, -S(O)₂R₅, -S(O)₂NHR₅, and



wherein

each R₅ and R₆ is a member independently selected from -H, -halo, -NO₂, -CN,
-OH, -CO₂H, -N(C₁-C₁₀)alkyl(C₁-C₁₀)alkyl, -O(C₁-C₁₀)alkyl,
-C(O)(C₁-C₁₀)alkyl, -C(O)NH(CH₂)_m(C₁-C₁₀)alkyl, -OCF₃, -benzyl,
-CO₂(CH₂)_mCH((C₁-C₁₀)alkyl(C₁-C₁₀)alkyl), -CO₂(C₁-C₁₀)alkyl,
-(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, C₁-C₁₀-(C₂-C₁₀)alkynyl,

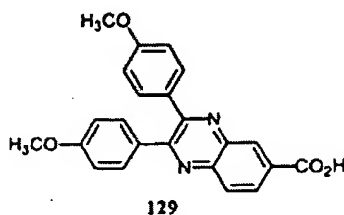
22 -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₅-C₁₀)cycloalkenyl,
23 -(C₅)heteroaryl, -(C₆)heteroaryl, -phenyl, naphthyl, -(C₃-C₁₀)heterocycle,
24 -CO₂(CH₂)_m(C₁-C₁₀)alkyl, -CO₂(CH₂)_mH, -NHC(O)(C₁-C₁₀)alkyl,
25 -NHC(O)NH(C₁-C₁₀)alkyl, -NH(aryl), -N=C(aryl),
26 -OC(O)O(C₁-C₁₀)alkyl, and -SO₂NH₂;
27 each m is independently an integer ranging from 0 to 8; and
28 each p is independently an integer ranging from 0 to 5.

1 34. (New) The method of claim 33, wherein said alkoxy group in R₄ is a
2 methoxy group.

1 35. (New) The method of claim 34, wherein said R₁ is a -(C₆)heteroaryl
2 group.

1 36. (New) The method of claim 35, wherein said -(C₆)heteroaryl group is
2 substituted.

1 37. (New) The method of claim 36, wherein said compound has the formula:



1 38. (New) The method of claim 33, wherein said cancer is selected from the
2 group consisting of ovarian cancer, peritoneal cancer, endometrial cancer, cervical cancer,
3 breast cancer, colorectal cancer, uterine cancer, stomach cancer, small intestine cancer, thyroid
4 cancer, lung cancer, kidney cancer, pancreas cancer and prostate cancer.